

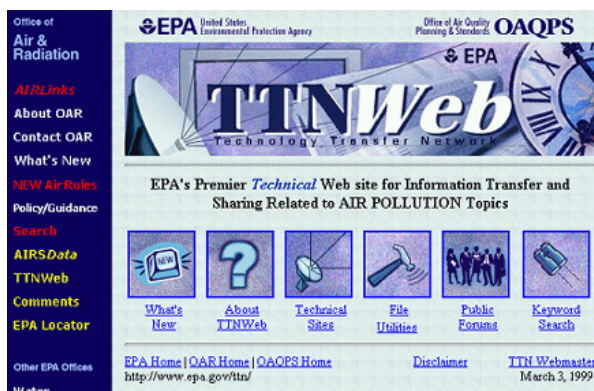
# **Air Emission Information on the CHIEF Website**



## Using the Internet to Find Air Emission Information- The CHIEF Web Site

### Where it All Began

The CHIEF (ClearingHouse for Inventory and Emission Factors) web site is part of the Office of Air Quality Planning and Standards (OAQPS) Technology Transfer Network, which originally began as a dial-up Bulletin Board System (BBS) that users could call via telephone on their computer. This was the beginning of EPA's state-of-the-art electronic distribution of information to the public. As technology expanded, the OAQPS TTN grew to incorporate TELNET (a remote terminal connection service) and File Transfer Protocol (FTP). In July 1996, access to all TTN BBS sites was made available on the World Wide Web using a "test server" which quickly became much more popular for user access than its dial-up predecessor. As a result of the overwhelmingly favorable response, the TTN was moved in August 1997 to the US EPA production server



(<http://www.epa.gov/ttn/>), to live with all the other EPA web sites.

The original TTN web pages were automatically generated by a program which emulated the ASCII text-based dial-up BBS system, so the TTN web pages were very "bare-bones" with very few graphics. However, with the new server, the TTN Web got a facelift, with more appealing graphics and more intuitive link structures. The CHIEF web site was one of the first TTN web sites to make the transition from the test server to the EPA production server.

In addition to the CHIEF web site, the TTN Web includes these other pages relating to air quality:

**AIRS-** AIRS is the repository of air quality related information submitted by State and local agencies. The AIRS TTN contains important technical information that State and local agencies need to utilize AIRS in an effective manner. Information includes key guidance memos on data reporting requirements, procedures to implement new system features, AIRS newsletter, list of contacts, user manuals and the like. ....

**GEI-** The Geographic/Ecosystems Initiatives are geographically focused environmental activities which leverage the resources of states, local governments, regulated communities, environmental groups, and citizens

**AMTIC-** The Ambient Monitoring Technology Information Center contains information and files on ambient air quality monitoring programs, details on monitoring methods, relevant documents and articles, information on air quality trends and nonattainment areas, and federal regulations related to ambient air quality monitoring.

**CATC-** The Clean Air Technology Center serves as a resource for all areas of emerging and existing air pollution prevention and control technologies, and provides public access to data and information on their use, effectiveness, and cost. CATC includes RACT/BACT/LAER Clearinghouse (RBLC).

**CHIEF-** The ClearingHouse for Inventories and Emission Factors contains the latest information on emission inventories and emission factors. It provides access to the latest information and tools for estimating emissions of air pollutants and developing air emission inventories.

**CICA-** The U.S.-Mexico Information Center on Air Pollution (Centro de Información sobre Contaminación de Aire-CICA) provides technical support and assistance in evaluating air pollution problems along the U.S.-Mexico border. CICA is sponsored by the EPA's Clean Air Technology Center (CATC).

**ECAS-** The Innovative Strategies and Economics Group conducts analyses of costs, benefits, and economic and regulatory impacts of air quality management strategies, programs, and regulations developed throughout the Office of Air Quality Planning and Standards (OAQPS).

**EMC-** The Emission Measurement Center provides access to emission test methods and testing information for the development and enforcement of national, state, and local emission prevention and control programs.

**FACA-** A committee under the provisions of the Federal Advisory Committee Act (FACA) was formed by EPA to obtain advice and recommendations on integrated approaches for implementing any revised national ambient air quality standards (NAAQS) for ozone and particulate matter, as well as a new regional haze program.

**NELAC-** The National Environmental Laboratory Accreditation Conference promotes acceptable performance standards for the operation of environmental laboratories.

**NSR-** The New Source Review (NSR) Web site is designed to provide material and information pertaining to NSR permitting.

**OAR P&G-** The OAR Policy and Guidance Web site is designed to provide access to rules, policy, and guidance documents produced by the US EPA Office of Air and Radiation (OAR).

**RTO-** The Regional Transport of Ozone group focuses itself on matters dealing with ground-level ozone (smog) and its' precursors (including nitrogen oxides or NOx).

**SBAP-** The Small Business Assistance Program has been developed to help state and EPA small business assistance programs share information about their materials and activities.

**SCRAM-** The Support Center for Regulatory Air Models is a source of information on atmospheric dispersion (air quality) models that support regulatory programs required by the Clean Air Act.

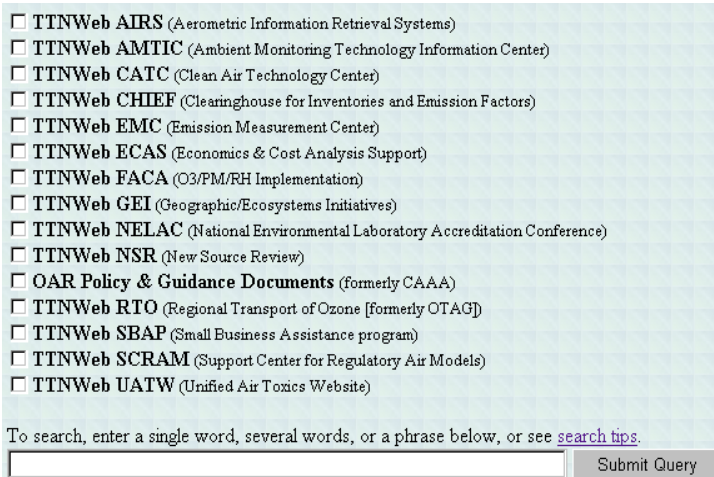
**UATW-** The Unified Air Toxics Web site is a cooperative Web site for Federal/State and local air toxics programs and central repository for air toxics information.

## TTN Search

You can search one or more of the web sites on the Technology Transfer Network by visiting the TTN Search page ([http://www.epa.gov/ttn/ttn\\_search.html](http://www.epa.gov/ttn/ttn_search.html)). ***If you want to search the entire Technology Transfer Network, do not check the boxes next to the listed TTN site entries.*** If you want to search a single or a few sites, click in the box beside each site that you would like to search. At the bottom of the page, you will see a text box where you can enter a word or a phrase, or a series of words and phrases. When you have entered the terms you would like to search for, click on "Submit Query" Here are some searching tips:

### Searching for Words and Phrases

Your search can include words and phrases separated by a comma. By default, words and phrases in the query are stemmed, meaning the search is broadened to include the stemmed variations of these words. The query below will search for the phrase "press releases" and stemmed variations of the word "wetlands":



The screenshot shows a list of checkboxes for various TTNWeb sites. The sites listed are: TTNWeb AIRS (Aerometric Information Retrieval Systems), TTNWeb AMTIC (Ambient Monitoring Technology Information Center), TTNWeb CATC (Clean Air Technology Center), TTNWeb CHIEF (Clearinghouse for Inventories and Emission Factors), TTNWeb EMC (Emission Measurement Center), TTNWeb ECAS (Economics & Cost Analysis Support), TTNWeb FACA (O3/PM/RH Implementation), TTNWeb GEI (Geographic/Ecosystems Initiatives), TTNWeb NELAC (National Environmental Laboratory Accreditation Conference), TTNWeb NSR (New Source Review), OAR Policy & Guidance Documents (formerly CAAA), TTNWeb RTO (Regional Transport of Ozone [formerly OTAG]), TTNWeb SBAP (Small Business Assistance program), TTNWeb SCRAM (Support Center for Regulatory Air Models), and TTNWeb UATW (Unified Air Toxics Website). Below the list is a text input field with the placeholder text "To search, enter a single word, several words, or a phrase below, or see [search tips.](#)" and a "Submit Query" button.

press releases, wetlands

You may want to search for the word "wetlands" and not the word along with all of its stemmed variations. To do this, you just delimit the search term in double-quotation marks. For example, the following query will search for the phrase "Region 1" and the word "wetlands":

"Region 1", "wetlands"

If searching for chemical ID numbers like 83-32-9 you can get better results by leaving out the hyphens and submitting the search as 83 32 9.

Note that searches are not case-sensitive by default. This means you can use "Region 1" or "region 1" in the above examples and get the same search results.

### Using Query Language

You can use operators and modifiers to apply logic to your query and pinpoint the exact information you are interested in. Popular operators are: AND, OR, and NEAR. A modifier can be used with an operator to further define your question for the search engine.

Frequently-used modifiers are: MANY and NOT. By default, the words "and," "or," and "not" are interpreted as query language; all other query language elements, such as the NEAR operator, are interpreted as words unless surrounded by angle brackets. Sample query expressions using query language are below.

The AND operator selects documents that contain all of the search elements you specify. To find documents that contain both "Region 1" and at least one stemmed variation of the word "wetlands" you can use the following query:

"Region 1" and wetlands

The OR operator selects documents that show evidence of at least one of the search elements. To find documents that contain either "Region 1" or at least one stemmed variation of the word "wetlands" you can use the following query:

"Region 1" or wetlands

## The CHIEF Web Site

The CHIEF web site continues to be the most comprehensive electronic repository of documents and software products developed by the Emission Factor and Inventory Group. The CHIEF primarily focuses on emission information for criteria and toxic pollutants from stationary sources, although some information is available for mobile sources (for more comprehensive information on mobile sources, please visit the **Office of Transportation and Air Quality** web site at <http://www.epa.gov/oms/>).

To go directly to the CHIEF web site, go to <http://www.epa.gov/ttn/chief/>.

Here, you will find a short description of the CHIEF web site, along with several links to EFIG information and products. Also included on the page are links to the **Search** web page, which allows you to search various TTN-affiliated web sites using keyword topics, as discussed in the previous section. If you have difficulty finding the information that you are looking for, you can also use the **Site Index** web page, which gives both a hierarchical and alphabetical listing of all the web pages on the CHIEF web site. The **CHIEF Public Forum** allows members of state/local agencies, industry, and others in the emission estimating community to share ideas, information and post questions. It's a great way to "network" with like-minded individuals around the world!

Other links on the CHIEF web site include a link to EFIG's quarterly newsletter, the *CHIEF Newsletter*, and is available only the Internet and through the listserver. You can download any section of the **Compilation of Air Pollutant Emission Factors** (AP-42) in either compressed (ZIP) WordPerfect files or Adobe Acrobat (PDF) files. Similarly, there are links to **Emission Inventory Guidance** documents and **Emission Estimation Software** (FIRE, TANKS, Landfill, Water8, SPECIATE, etc.) You will also find downloadable utility files such as

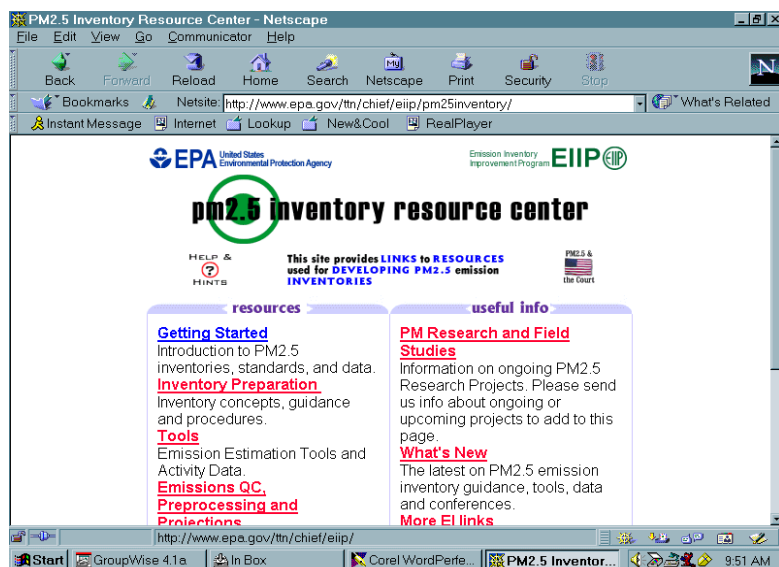


the PKUNZIP program for file decompression and the Adobe Acrobat Reader for PDF (portable document format) files. The CHIEF web site includes information on **Inventory Data & Projection**, where **National Air Pollutant Emission Trends Report**, the **National Air Quality and Emission Trends Report**, emission trends projection software, and other emission data can be found. There are also links to the **National Emission Trends (NET) Inventory** web site and the **Emission Inventory Improvement Program** web pages, which will be discussed in more detail later in this document. An important feature not to miss is the **What's New** web page, which is the area that notifies users of new software and documents that have been added to the web site. This web page also announces upcoming conferences and workshops pertaining to air emissions.

## EIIP Web Site

The Emission Inventory Improvement Program (EIIP), a jointly sponsored effort of STAPPA/ALAPCO and EPA, is an outgrowth of the Standing Air Emissions Work Group (SAEWG). Funding is provided by state/local agencies through the federal 105 grant programs. The EIIP Steering Committee and technical committees are composed of state, local, industry, and EPA representatives. Membership on technical committees is open to any state or local agency representative, industry group, and the public; interested individuals should contact the appropriate committee co-chair for information. The goal of EIIP is to provide cost-effective, reliable inventories by improving the quality of emissions information, and developing systems for collecting, calculating, and reporting emissions data. Visit the EIIP web site at <http://www.epa.gov/ttn/chief/eiip/> to read EIIP documents and to find out more information about EIIP.

New to the PM<sub>2.5</sub> committee web site, under EIIP, is the PM<sub>2.5</sub> Emission Resource Center located at <http://www.epa.gov/ttn/chief/eiip/pm25inventory/>. This page was developed as to provide state/local/tribal agencies with the resources and tools available to start a PM<sub>2.5</sub> inventory. There are also links to state and local agencies who have already completed a PM fine inventory, PM research studies and software tools.



## The National Emission Trends (NET) Inventory

The National Emission Trends (NET) Inventory is an emission inventory developed annually by EPA. The NET is a complete national inventory of stationary and mobile sources that emit

criteria pollutants. Criteria pollutants are those for which EPA has set health-based standards. The NET contains emission estimates for large stationary sources (also known as point sources), small stationary sources (also known as area sources) and mobile sources. Individual emission estimates are developed and stored for point sources, while aggregate emission estimates at the county level are developed and stored for area and mobile sources. This web page offers general guidance documents and emission inventory preparation guidance documents, which are available for download (<http://www.epa.gov/ttn/chief/ei/>).

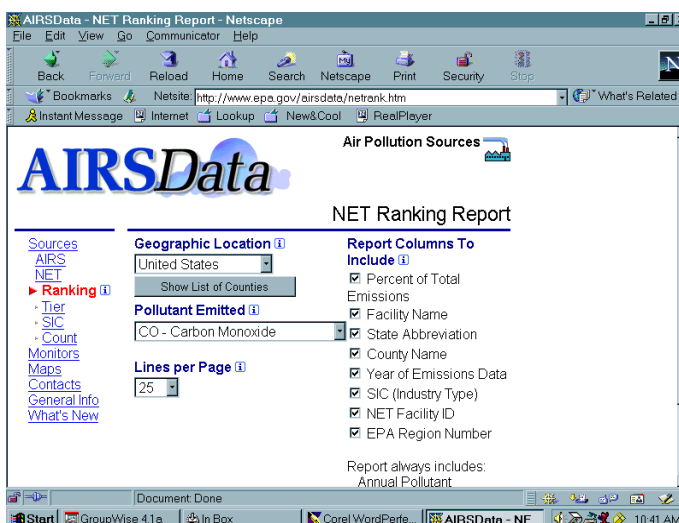
The AIRS Data web site, at <http://www.epa.gov/ttn/chief/ei/>, allows the user to query the NET Inventory and do reports based on:

**Ranking** - Lists each source in order of its pollutant emissions, ranking them from largest to smallest,

**Tier** - Summarizes all NET emissions (point, area, and mobile) into 14 major categories (Tier 1) or into 75 more detailed categories (Tier 2),

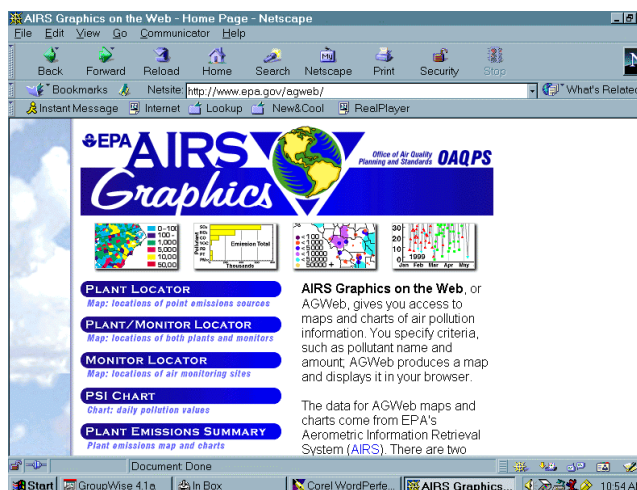
**SIC** - The number of sources and total air pollutant emissions for each Standard Industrial Classification (SIC) and,

**Count** - The number of sources and total air pollutant emissions for each geographic area (county, state, or EPA region).



Also available from this page is a link to the AIRS Graphic (<http://www.epa.gov/agweb/>). AIRS Graphics on the Web, or AGWeb, gives you access to maps and charts of air pollution information. You specify criteria, such as pollutant name and amount; AGWeb produces a map and displays it in your browser.

AGWeb maps show the locations of air pollution monitoring sites and "point" emission sources (factories, power plants, etc.). The AGWeb chart shows daily values of Pollutant Standards Index for a county or metropolitan area.

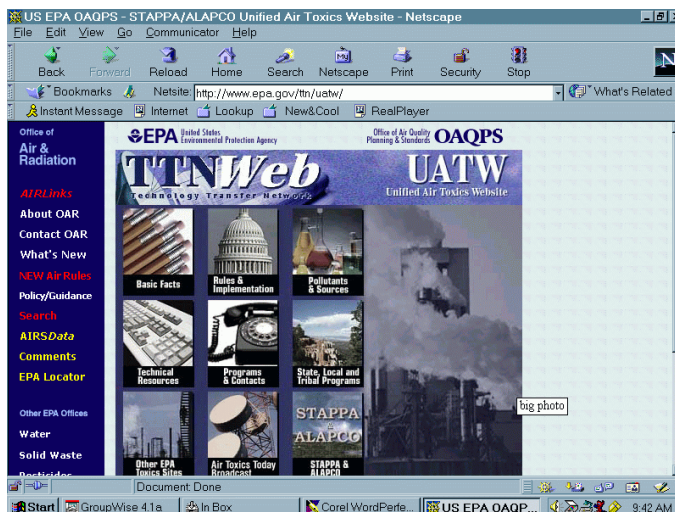


## More General Information

### Unified Air Toxics Web site

The Office of Air Quality Planning and Standards, in cooperation with the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), has developed a web site for air toxics information called the Unified Air Toxics Web site, at

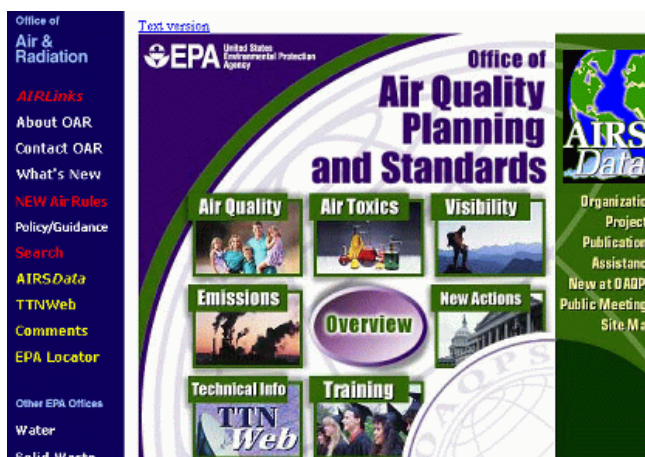
<http://www.epa.gov/ttn/uatw/>. Within the US EPA, there are many different program offices working on different pieces of the air toxics puzzle. This site is unified because it is designed to be a central clearinghouse and repository for air toxics information from these various entities and, by sharing information and data, and reduce duplication of effort, wherever possible.



The Unified Air Toxics Web site contains links for various sources of information, including a listing of the 188 (formerly 189) Hazardous Air Pollutants (HAPS) and corresponding information about them, US EPA and state/local agency air toxics programs and contacts, technical publications and electronic information, and EPA regulations concerning air toxics. Included in the air toxics regulatory information are the newly updated **Clean Air Act Amendment** (CAAA) sections 112(k) and 112(c)(6) which concern air toxics emissions inventories.

Most of the information on the web discussed up to this point has been provided under the Office of Air Quality Planning and Standards division of the EPA. If you are interested in finding out more information pertaining to air issues, you can visit the OAQPS web site at

<http://www.epa.gov/oar/oaqps/>. This web site serves as a gateway to information concerning the organizational structure of OAQPS, plus many regulatory, guidance, and public information documents, as well as software programs designed to help model, calculate, or retrieve air data. Users can also find out about public outreach and education programs associated with OAQPS. The OAQPS web site also offers a search function that will help users locate the information they need more quickly.



The OAQPS web site offers direct links to the OAQPS TTN web pages, air quality information, air toxics information, visibility, regulations and the OAQPS Public Forum for questions and answers.

If you are looking for other environmental information that does not pertain to air, you can always visit the US EPA web site at <http://www.epa.gov>. The US EPA web site is home to all of the pages mentioned in this guide. If you are unsure of where to begin your search for environmental information, this is a good place to start. The US EPA web site offers a search engine that will search all of the EPA web sites for the information you need.

The US EPA web site is designed for easy access to the general public, so finding what you need may be more difficult to do. Its simple design can be somewhat deceiving, and often users complain about not being able to find their way around.

This is a common cry from many beginning Internet users-and it's no wonder! The Internet World Wide Web is an endless, intricate mass of information that is often difficult to navigate. The EPA has made many attempts to make its information as easily accessible as possible, but we are constantly restructuring and moving things around as we learn more about our users and more information becomes available on the WWW. So, don't be surprised if the information in this guide changes a bit over the next few months. If all else fails, you can always go to the EPA web site to begin your search.

If you have questions about air emission information or anything about these web pages, call the Info CHIEF help desk at (919) 541-5285.



# **Air CHIEF**

**Version 7.0**



# Air CHIEF

## Version 7.0

### System Information

The Air CHIEF CD was developed by the Emission Factor and Inventory Group of OAQPS to provide current emissions data from existing EPA reports and databases in one convenient location. It can be purchased from the Government Printing Office (GPO), but is provided to you as a part of this course. Included on the CD:

- The *Compilation of Air Pollutant Emission Factors*, Volume II, Stationary Point and Area Sources, (AP-42) 5<sup>th</sup> ed., Supplement A through E. Highway Mobile Sources sections of AP-42 Volume II, 5<sup>th</sup> ed. are also included.
- The *Emission Inventory Improvement Program's Preferred and Alternative Methods for Estimating Air Emissions*, Volumes I - IX
- *FIRE*, the Factor Information Retrieval System, version 6.22
- The *Locating and Estimating* document series
- WATER8 and CHEMDAT8
- PC BEIS
- PMCALC
- AP-42 background documents

AP-42, the EIIP reports, the L&Es, and FIRE have been converted to an Adobe® Acrobat® PDF format. The Acrobat Reader®, version 3.0 for Windows provides a searchable and easy to use Windows™ interface. This course is designed to help you install, and effectively use the Acrobat software from your PC. The remaining applications are available to you to download to your PC and use.

### Installation to a PC

#### Windows™ 95/98 and Window NT

From Program Manager

- >> Install Air CHIEF by selecting '**Start**' from the menu bar.
- >> Select the '**Run**' option on the command line and type the name of the CD-ROM drive, followed by "**Chief32**" and press **ENTER**.

The setup program will prompt you for a group name. You may specify any group name or click OK to accept the default group (Air CHIEF 7.0). Next, the setup program will install the Adobe® Acrobat® Reader to your hard drive in an Adobe Acrobat Group. At the time of development, version 4.0 of the Reader with the SEARCH function was not available for distribution. SEARCH is not the same as FIND> If you choose to bypass the Acrobat Reader installation during the air CHIEF install, be sure that

the version of the Acrobat Reader installed on your PC includes the SEARCH function. Without the SEARCH function you will not be able to do global searches for information on the CD. Only the Adobe Acrobat Reader and an icon for Air CHIEF are installed.

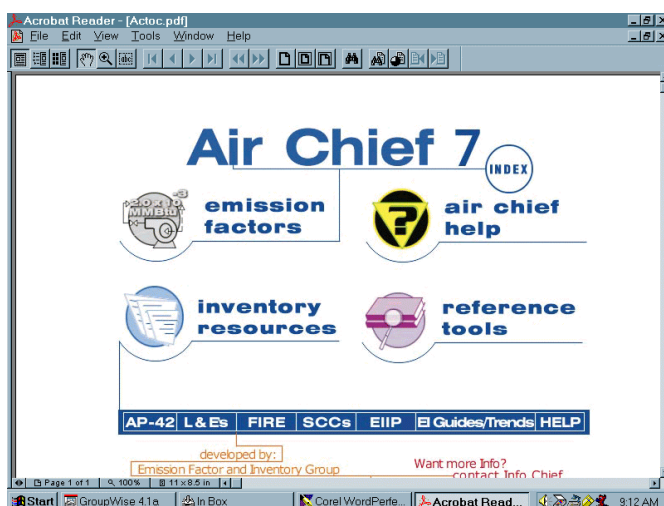
On the CD you will find installable copies of the following EPA software located under the \programs directory. Each program has installation instructions and a manual.

BEIS  
Chemdat 8  
LANDFILL  
SPECIATE

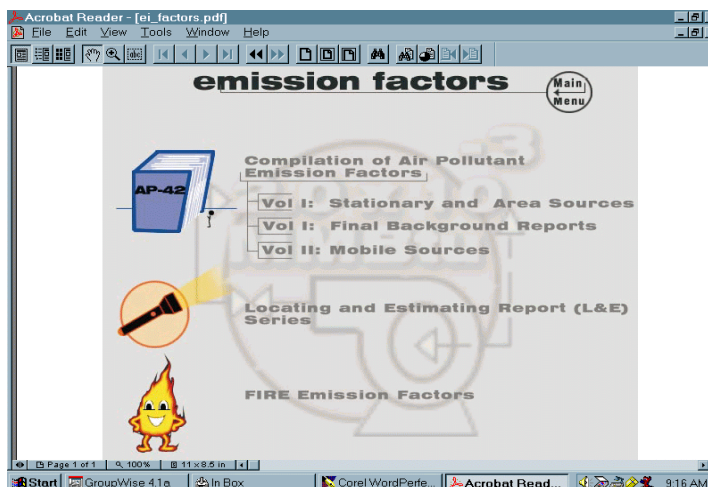
Chem9  
FIRE 6.22  
PMCALC  
Water 8

## Starting Air CHIEF

Go to Start, Program, Air CHIEF 7.0, Air CHIEF.

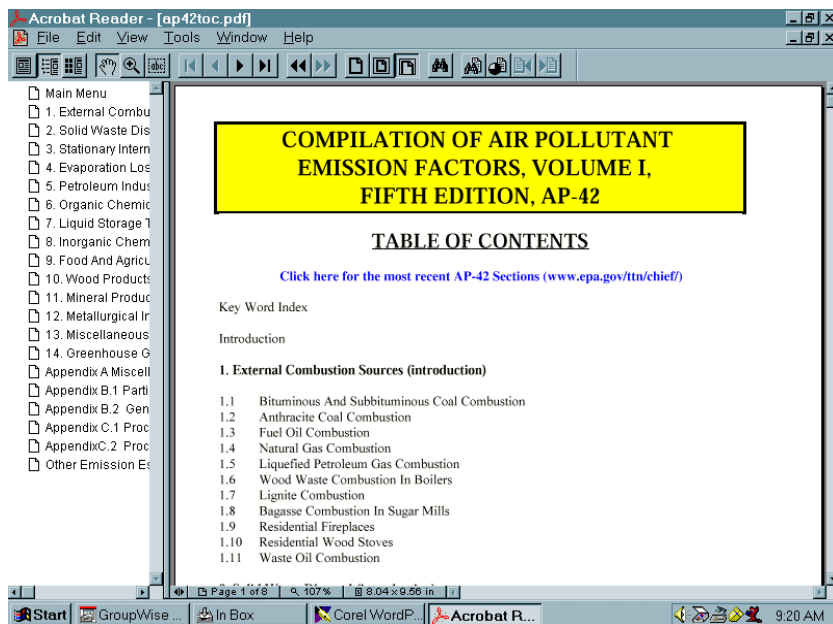


If you select emission factors



you will be able to find the AP-42 Volumes I and II, Locating and Estimating (L&E) Document Series and the FIRE detail reports.

If you were to select the AP-42 Volume I:



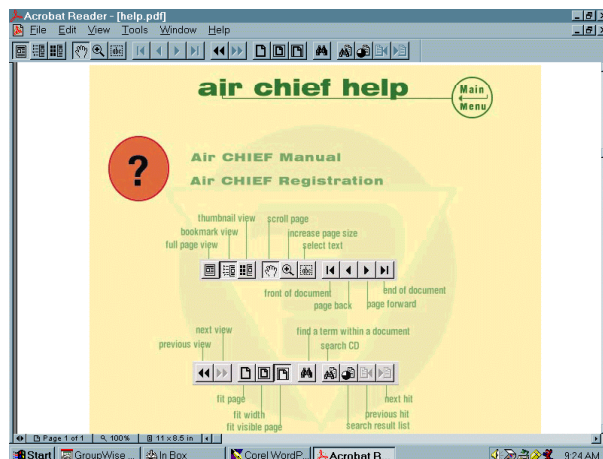
## The AP-42 Main Menu Bookmark

To return to the Air CHIEF Starting Page, click on the **Main Menu** bookmark in the upper left hand corner of the Bookmark window. The Bookmark window should appear on the left side of the Reader window. If you do not see the Bookmarks, select the **Table of Contents View** button on the Reader Toolbar. This link is found in every document on the CD.

## Table of Contents View button

## The Reader Toolbar

The Acrobat Reader Toolbar will help you navigate around the CD. The diagram below, which can be found under Air CHIEF Help on the Starting Page, explains each of the functions. We will go over each of these functions in class.



## Searching Air CHIEF

One of the features to Version 7.0 of Air CHIEF is the ability to search the entire CD for emission

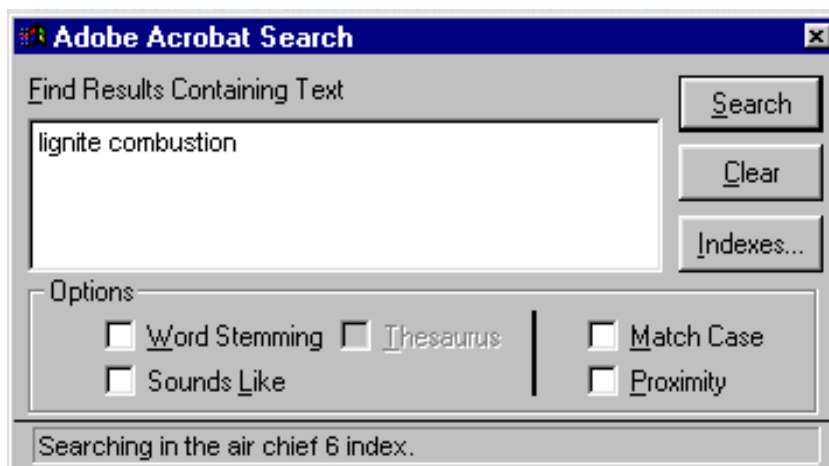
factor information on a specific source. Following are the steps involved to locate all of the information on the CD on the subject of 'lignite subject'

> > From the Toolbar, click on the search icon.



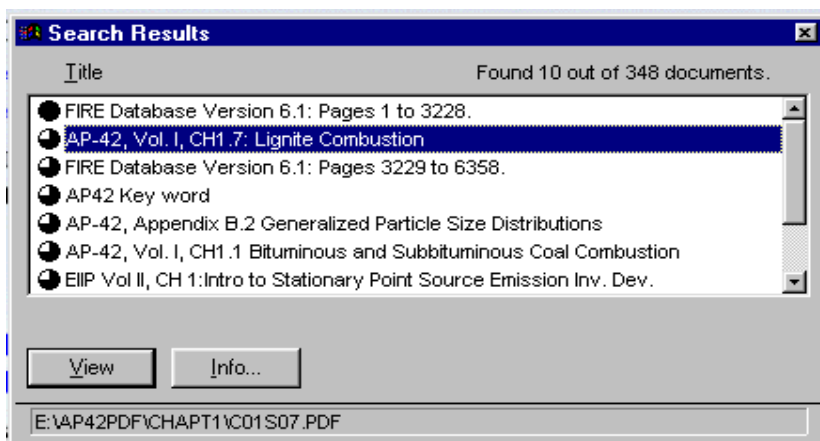
>> NOTE: When Air CHIEF is opened, the index **air chief 7** is automatically selected. If you used a previous version of Air CHIEF, remove the old index by clicking on '**Indexes**'. Highlight the old indexes, **acindex** and **locating and estimating**, and '**Remove**' it. Click on **OK**.

>> Enter a Search Query in the Find Results Containing Text dialog box. A query is text or other items that define the information you want to find. In this example, the text, "lignite combustion" has been entered.



> > From the Find Results Containing Text dialog box, click on 'Search'

>> A Search Result Dialog box will appear with a list of documents containing your query. From the search results, we see that chapter 1, section 7 of AP-42 is about lignite combustion. To '**View**' that section of AP-42, click on the section title to open the document. Each occurrence of 'lignite combustion' will be highlighted in the document that you have selected.



> > Using the Next Hit or Previous Hit buttons on the Toolbar, move through section 1.7 of AP-42.



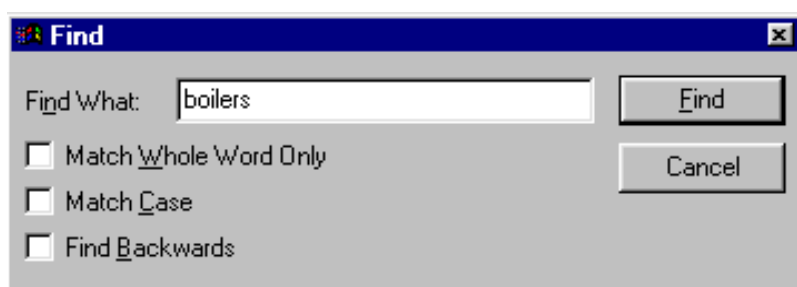
> > The Search Results button takes you back to your list of Search Results.



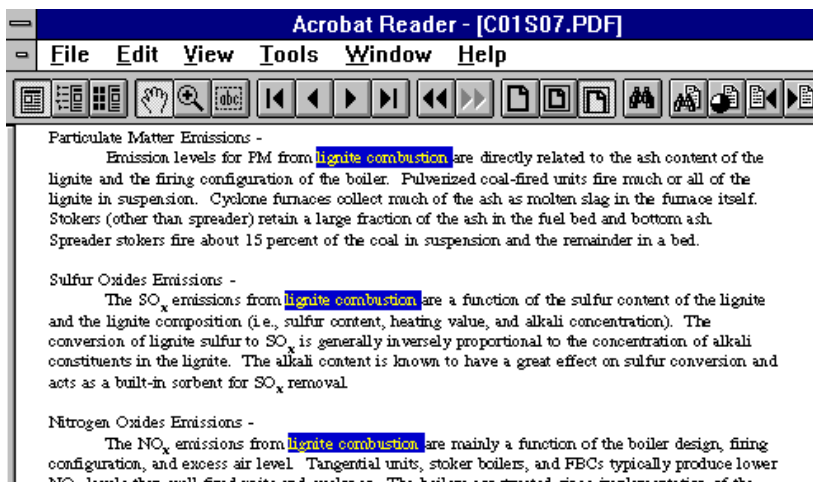
## Using Find to Search a Document

**Find** can be used to search text in a single document. **Find** is a much slower operation than **Search**, therefore using Search is preferable in large documents such as the FIRE tool.

>> Select a document you wish to search and choose '**Find**' from the '**Tools**' menu or press the '**Find**' button from the toolbar.



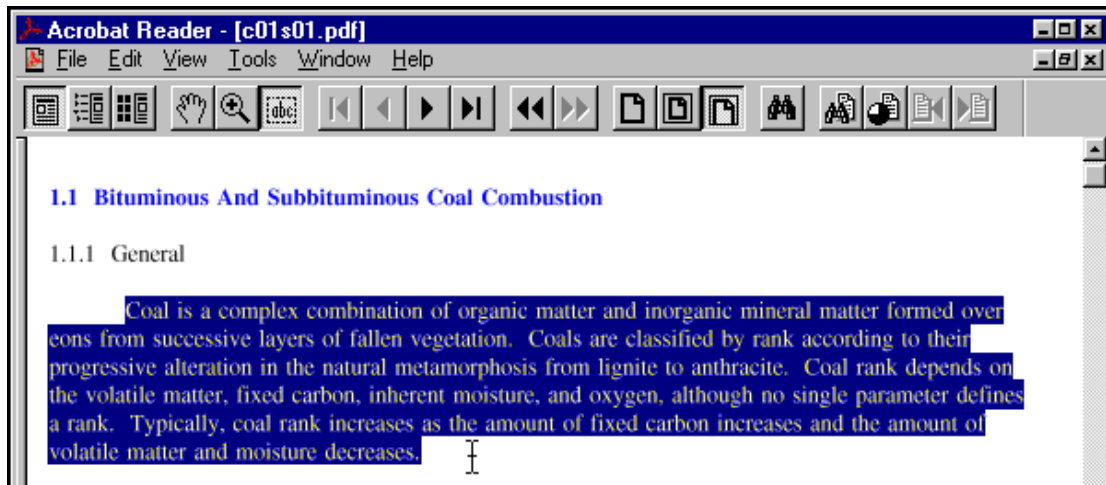
>> When the *find* dialog box is displayed, enter your query. Your query will be highlighted if it is found in the document. Use **F3** to go to the next instance of your query.



## Selecting and Copying Text to Clipboard

>> Click on the '**Select Text**' button on the Toolbar. Press the left mouse button while dragging the cursor over the text you want to select. To select all the text on the current viewing page choose '**Edit**' and click on '**Select All**'.

### Select Text button

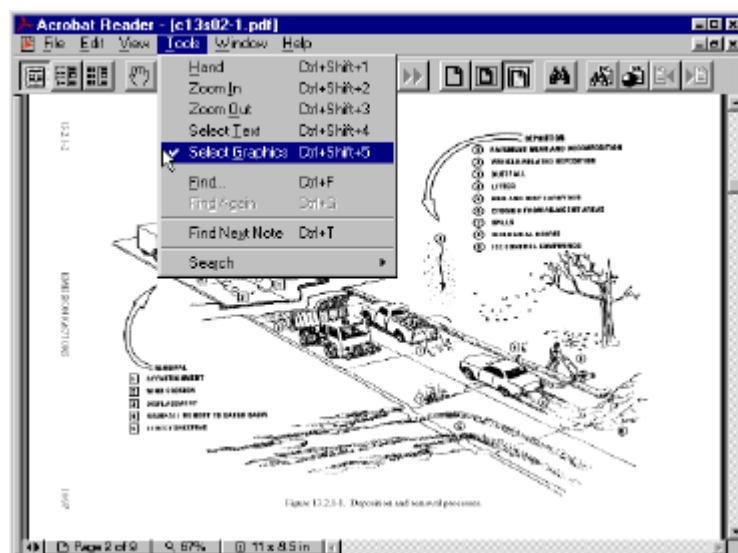


>> To

copy the selected text to Clipboard, choose **Edit** and select **Copy**. Once the text is in the Clipboard, switch to another application and paste it into an open document.

## Selecting and Copying Graphics to Clipboard

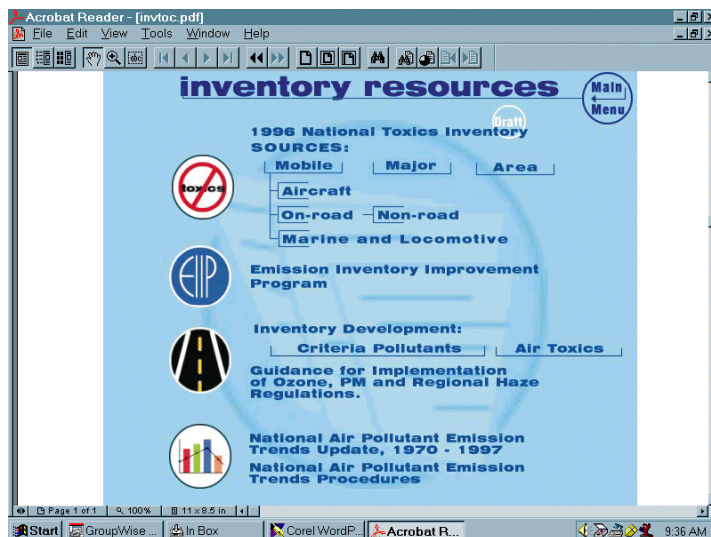
>> Choose '**Tools**' from the menu, and click on '**Select Graphics**'. The cursor will change to the cross-hair cursor. Draw a rectangle around the graphics you would like to copy.



>> To copy the selected graphics to Clipboard, choose **'Edit'** and select **'Copy'**. Once the graphics is in the Clipboard, switch to another application and paste it into an open document.

## Inventory Resources

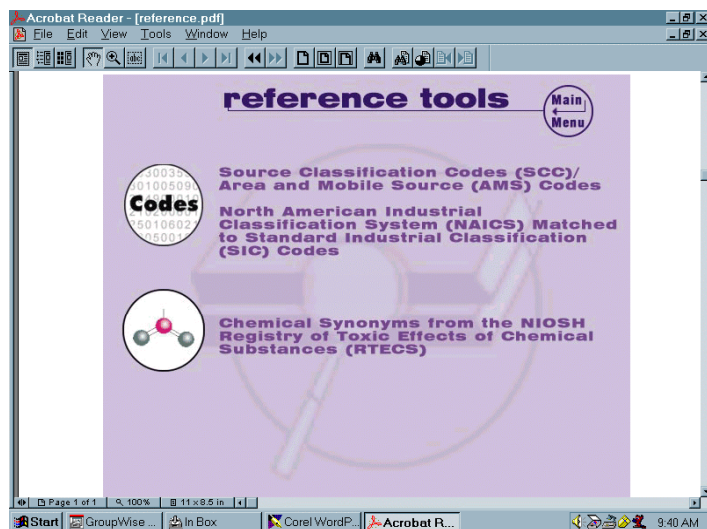
If you were to select Inventory Resources from the Start Up page:



you can find the National Toxics Inventory, Emission Inventory Improvement Program, Volumes I - IX, Handbooks for developing a criteria and toxic inventory and the National Air Pollutant Emission Trends.

## Reference Tools

Under reference tools,



you will find the complete list of SCC, as well as a cross-walk of North American Industrial Classification System (NAICS) to Standard Industrial Classification (SIC) Codes. Also, there is a list of Chemical Synonyms from the NIOSH Registry of Toxic Effects of Chemical Substances (RTECS).

## **Air CHIEF Technical Support**

For questions about Air CHIEF, please call the Info CHIEF help desk at (919) 541-1000.

# **FIRE**

**Version 6.22**



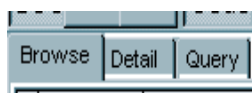
## FIRE 6.22

### SCREENS/TABS:

SCC	POLLUTANT	CAS	COC	CTL1	COD	CTL2	FACTOR	FACTOR UNITS
1010010	Carbon monoxide	630-01-000		UNCONTROLLE			6.000E-1	Lb per Tons Anthraci
1010010	Lead	7439-97-000		UNCONTROLLE			8.900E-5	Lb per Tons Anthraci
1010010	Nitrogen oxides (NOx)		000	UNCONTROLLE			1.800E1	Lb per Tons Anthraci
1010010	PM, filterable		000	UNCONTROLLE			Formula	Lb per Tons Anthraci
1010010	PM, filterable		100	BAGHOUSE			2.000E-2	Lb per Tons Anthraci
1010010	PM, filterable		121	MULTIPLE CYCL			2.000E0	Lb per Tons Anthraci
1010010	PM10, filterable		000	UNCONTROLLE			Formula	Lb per Tons Anthraci
1010010	PM10, filterable		100	BAGHOUSE			Formula	Lb per Tons Anthraci
1010010	PM10, filterable		121	MULTIPLE CYCL			Formula	Lb per Tons Anthraci
1010010	Selenium	7782-49-128		ELECTROSTAT			3.014E-5	Lb per Million Btus He
1010010	Sulfur oxides (SOx)		000	UNCONTROLLE			Formula	Lb per Tons Anthraci
1010010	Volatile organic compo		000	UNCONTROLLE			7.000E-2	Lb per Tons Anthraci
1010010	Arsenic	7440-38-000		UNCONTROLLE			1.900E-4	Lb per Tons Anthraci
1010010	Beryllium	7440-41-000		UNCONTROLLE			3.100E-4	Lb per Tons Anthraci
1010010	Biphenyl	92-52-000		UNCONTROLLE			2.500E-2	Lb per Tons Anthraci

**SCC** Level 1: External Combustion Boilers  
 Level 2: Electric Generation  
 Level 3: Anthracite Coal  
 Level 4: Pulverized Coal  
 Standard AIRS Units: Tons Anthracite Burned

0 of 17319 Current Factors included.



**BROWSE:** Default View. An abbreviated list of all emission factors. Sorts by SCC, POL, CTL, (name or code) or GOTO a specific record. When a QUERY is run on the database, the results are displayed in BROWSE.

**DETAIL:** Displays the detailed emission factor record for the current record indicated in the BROWSE screen. Uses navigational buttons to view subsequent, previous, first and last emission factor records, without going back to BROWSE.

*(Browse/Detail toggle works together but Query/Detail toggle does not. You must RUN a query to see the matching emission factors)*

**QUERY:** When SCC is selected, displays a list of all SCC codes and their 4-level descriptions, whether or not they have associated emission factors.

When POL is selected, shows a list of all pollutants and the CAS numbers.

When CTL is selected, shows a list of all control devices, their codes and descriptions.

### BUTTONS:

**Toggle one of three:**

**SCC:** Source Classification Code

**POL:** Pollutant

**CTL:** Control Device



**Toggle one of two:**



**CODE:** Sorted by Code Number

(e.g. POL and CODE would sort by CAS number for pollutant)

**NAME:** Sorted alphabetically by name

(e.g. POL and NAME would sort by chemical name for pollutant)

#### [Navigational Arrows]

- |< Go To First item displayed
- < Go To Previous item (useful in DETAIL screen)
- > Go To Next item (useful in DETAIL screen)
- >| Go To Last item displayed

**GOTO:** Allows user to jump to specific record in BROWSE or QUERY. Must type in code number if CODE is selected, name if NAME is selected.

**Show included rows only:** Only “included” records are displayed

**Show all rows:** All records are displayed



**INCLUDE:** (not an option in BROWSE or DETAIL)

Allows user to “include” items by SCC, POL, or CTL, from QUERY screen only.

Serves same function as selecting an item by double clicking.

**CLEAR:** clears “included” choices ***for just the currently active criteria*** (SCC, POL, or CTL). To “clear all” included choices, first hit SCC, then CLEAR, then POL, then CLEAR, then CTL, then CLEAR

**RUN:** Searches the database for emission factors which match the “included” or “selected” criteria. Results appear in BROWSE screen. If there are no emission factors in the database for an “included” SCC, POL or CTL, it will run the search but return nothing in the BROWSE screen.

**PULL-DOWN MENUS-** these provide an alternative way to using the buttons and tabs.

#### FILE

**Print:** prints the DETAIL screen for currently displayed record, selected records or all records.

**Save:** Can save to ASCII delimited text file or to DBF file. Most spreadsheet programs (i.e. Excel or Lotus) can import either format.

**Exit:** Exits the program. Queries will not be saved on exit.

#### SORT

Choose one of six possible sort orders for records displayed in BROWSE, DETAIL or QUERY. Functions the same as choosing the sort order with the SCC/POL/CTL and CODE/NAME toggle buttons.

## VIEW

### Toggle between All Rows and Included Rows

**All Rows** is the same as using the **Show all** rows button. All records are displayed.

**Included Rows** is the same as selecting the **Show included rows only** button. Only “included” records are displayed.

- Toggle between current or

## MOVE

Navigational controls that work like the GOTO button and the arrow buttons.

## HELP

Closest thing to a user’s manual

### FIELD SIZE adjustment: in browse view:

When information in a field goes beyond the visible edge of a field:

Move cursor to field name at top of display. Click with mouse on side of box, hold down mouse key and move the edge of the field side to side to reduce or enlarge field width.

You can only adjust the width at the top of the field name, not in the fields themselves.

## FIRE 6.22 Exercise

### 1. To find all emission factors for SCC 10100401

Select **QUERY** screen

Sort by **SCC** and **CODE**

**GOTO** "10100401" (External Combustion Boilers/Electric Generation/Residual Oil)

**Include** 10100401 (Hint: can use "Include" button or you can just double-click anywhere on the record to select it)

**RUN** query

Wait for search to complete. When done, records are displayed in **BROWSE** screen. Should result in 74 records.

### 2. To return factors for SCC 10100401, pollutant chromium only:

Return to the **QUERY** screen

Sort by **POL** and **NAME**. (Note that you need to manually select Show All Rows)

**Include** "chromium". (Included in Query status info shows 5 pollutants. Using Show Selected button will quickly show you the compounds containing the word "chromium" that have been included)

**RUN** query

Wait for search to complete. When done, records are displayed in **BROWSE** screen. Should result in 4 records. (2 Chromium and 2 Chromium VI)

### 3. To return factors for SCC 10100401, pollutant chromium, using a Flue Gas Recirculation control device:

Return to the **QUERY** screen

Sort by **CTL** and **NAME**. (Note that you need to manually select Show All Rows)

**Include** "flue". (Show Selected will show you that the 2 controls included are 026 and 039.

Deselect 039, "Flue Gas Desulfurization", by double-clicking)

**RUN** query

Wait for the search to complete. When done, records are displayed in **BROWSE** screen. Should result in 2 records (1 Chromium and 1 Chromium VI)

**Clear out all 3 criteria searches \*.**

### 4. To return factors for catalytic converters:

Select **QUERY** screen

Sort by **CTL** and **NAME**

**GOTO** "catalytic converters"

**Include** "catalytic converters"

**RUN** query

Wait for the search to complete. When done, records are displayed in **BROWSE** screen. Should result in 3 records.

**Clear out CTL search**

### 5. To find all emission factors for SCC 10100910

Select **QUERY** screen

Sort by **SCC** and **CODE**

**GOTO** "10100910" (External Combustion Boilers/Electric Generation/Wood/BarkWaste)  
**Include** 10100910

**RUN** query

Wait for search to complete. When done, records are displayed in BROWSE screen. Should result in 5 records.